

WHAT IS CLAIMED IS:

1 1. A portal imaging device positioning apparatus attachable to a
2 radiation therapy device gantry, comprising:

3 a support attachable to said gantry; and

4 a vertically-adjustable portal imaging device positioner
5 attachable to said support, said portal imaging device positioner operable in a
6 first mode and a second mode, wherein in said first mode said portal imaging
7 device positioner maintains an imaging panel in position to receive radiation
8 passing through a body maintained in a patient plane, and wherein in said
9 second mode portal imaging device positioner maintains said imaging panel
10 to receive radiation substantially at said patient plane.

1 2. A portal imaging device positioning apparatus according to
2 Claim 1, said vertically-adjustable portal imaging device positioner including:

3 a vertical drive unit adjustably attachable at a mounting cavity to
4 said support; and

5 a mounting unit adjustably attachable to said vertical drive unit,
6 and adapted to deploy said imaging panel from a vertical position to a
7 horizontal position.

1 3. A portal imaging device positioning apparatus according to
2 Claim 2, wherein said vertical drive unit is adjustable in said first mode such
3 that a top of said support is substantially adjacent a top of said mounting
4 cavity, and adjustable in said second mode such that a bottom of said support
5 is substantially adjacent a bottom of said mounting cavity.

1 4. A portal imaging device positioning apparatus according to
2 Claim 3, wherein said imaging panel is adapted to be temporarily secured to
3 said support during an adjustment from said first mode to said second mode.
4

1 5. A portal imaging device positioning method, comprising:

adjusting an imaging panel operably secured to a radiation therapy device gantry from a first position in a first mode below a patient plane to a second position in a second mode at a patient plane.

6. A method according to claim 5, said adjusting comprising:
temporarily securing a vertically positioned imaging panel to a support;
temporarily unsecuring a main drive assembly from said support;
adjusting said main drive assembly to said second position;
re-securing said main drive assembly; and
unsecuring said vertically positioned imaging panel.

7. A method according to claim 6, said adjusting comprising:
adjusting said vertical drive unit in said first mode such that a top of said support is substantially adjacent a top of a mounting cavity on said vertical drive unit; and
adjusting said vertical drive unit in said second mode such that a bottom of said support is substantially adjacent a bottom of said mounting cavity.

8. A method according to Claim 7, further comprising
horizontally deploying said imaging panel after said imaging panel has been adjusted to said second position.

9. A portal imaging system, comprising:
a radiation delivery apparatus; and
means for deploying an imaging panel in a first mode to receive radiation from said apparatus below a patient plane and in a second mode at said patient plane.

10. A system according to Claim 9, said deploying means comprising:

3 a vertical drive unit adjustably attachable at a mounting cavity to
 4 a support; and
 5 a mounting unit adjustably attachable to said vertical drive unit,
 6 and adapted to deploy said imaging panel from a vertical position to a
 7 horizontal position.

1 11. A system according to Claim 10, wherein said deploying
 2 means further comprises means for adjusting said vertical drive unit in said
 3 first mode such that a top of said support is substantially adjacent a top of
 4 said mounting cavity, and in said second mode such that a bottom of said
 5 support is substantially adjacent a bottom of said mounting cavity.

1 12. A system according to claim 11, comprising:
 2 means for temporarily securing said imaging panel to said
 3 support; and
 4 means for temporarily unsecuring a main drive assembly from
 5 said support.

1 13. A portal imaging device method, comprising:
 2 providing a support attachable at a first end to a treatment
 3 gantry; and
 4 providing a vertically-adjustable portal imaging device positioner,
 5 said portal imaging device positioner operable in a first mode and a second
 6 mode, wherein in said first mode said portal imaging device positioner
 7 maintains an imaging panel in position to receive radiation through a body
 8 maintained in a patient plane, and wherein in said second mode portal
 9 imaging device positioner maintains said imaging panel to receive radiation at
 10 said patient plane.

1 14. A method according to Claim 13, said vertically-adjustable
 2 portal imaging device positioner including:
 3 a vertical drive unit adjustably attachable at a mounting cavity to

4 said support; and
5 a mounting unit adjustably attachable to said vertical drive unit,
6 and adapted to deploy said imaging panel from a vertical position to a
7 horizontal position.

1 15. A method according to Claim 14, wherein said vertical drive
2 unit is adjustable in said first mode such that a top of said support is
3 substantially adjacent a top of said mounting cavity, and adjustable in said
4 second mode such that a bottom of said support is substantially adjacent a
5 bottom of said mounting cavity.

1 16. A method according to Claim 15, wherein said imaging
2 panel is adapted to be temporarily secured to said support during an
3 adjustment from said first mode to said second mode. .